APPENDIX R

In order to maintain navigation and flood control channels for maritime trade, recreational boating, and other purposes, approximately five million cubic yards (cy) of sediment must be dredged annually from San Francisco Bay. Historically, the majority of dredged material has been disposed at in-Bay sites. However, in recent years, dredging and disposal in the Bay have become increasingly controversial. The need for feasible alternatives to in-Bay disposal has become apparent, and interest has been growing in utilizing dredged material as a resource. This can be accomplished in part by substituting dredged material for traditional sources of cover, construction, capping, or lining material at sanitary landfills. Landfills are safely able to use dredged material unsuitable for unconfined aquatic disposal, which makes them a promising disposal option for such material.

LANDFILL ACCEPTANCE OF DREDGED MATERIAL

In order for dredged material to be used at landfills, arrangements must be made on a case-by-case basis with the landfill operator. Currently it is the burden of the dredger to contact individual landfills in order to determine where dredged material is appropriate for disposal. Dredged material must meet the facility's waste acceptance criteria, as well as meet any physical characteristics required for a particular use. In order to be accepted at a facility, all material, either for disposal or reuse, must contain at least 50 percent solids and must not contain moisture in excess of the moisture-holding capacity of the landfill, either initially or as a result of waste management operations, compaction, or settlement.[1] The moisture requirement, however, does not affect the possible acceptance of dredged material at landfill sites with rehandling and stockpiling capabilities.

TESTING OF MATERIAL

In accordance with the testing guidelines set out by the U.S. Army Corps of Engineers (USACE) and the Environmental Protection Agency (EPA), dredged material proposed for aquatic disposal must undergo elutriate analysis and be evaluated for water-column toxicity. The tests required for aquatic disposal are distinct from the bulk chemical and WET analyses required for disposal at a landfill.

LANDFILL DISPOSAL FEES

Landfills charge a tipping fee for accepting waste at their facility. Fees vary from facility to facility. Tipping fees for landfill units with greater engineering controls (Class II) are higher than for units with less stringent controls (Class III). Landfills may also discount or waive fees for material that will be used in their operations (e.g., for daily cover), depending on the composition of the waste and the need of the landfill to acquire such material. The Solid Waste Facility permit limits the daily tonnage of waste that a landfill can accept. All waste, upon arrival, is weighed and subjected to a state disposal surcharge. All material accepted at a landfill is included in the permitted daily tonnage of the facility and is subjected to the state surcharge, except for soil,

[1] *Typical Wastes Acceptable at Class III Landfills*

either clean or contaminated, used for daily cover, or approved Alternative Daily Cover (ADC).[2] The exemption of contaminated soil from the state surcharge and daily tonnage is outlined in *LEA Advisory No. 5* "Use of Non-Hazardous Contaminated Soil as Daily Cover," issued by the IWMB on December 15, 1993.

LANDFILL FEASIBILITY

Sixteen of the 127 Bay and Delta area landfills that were studied have been identified as highly feasible for accepting dredged material for reuse purposes. (This does not include Redwood Landfill in Marin County which is already accepting dredged material for use as daily cover. The sixteen highly feasible landfill sites are located in eight different counties. They have a total capacity to accept over five million cy of dredged material for use in the landfills' operations, with individual site acceptance ranging from 35,000 cy to 2 million cy per year. The life expectancy for these sixteen landfills ranges from one to more than fifty years, with the mean average being nineteen years.

[2]Scott Walker, IWMB. Personal Communication, 1/7/94.